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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,575	10/30/2003	Ovidiu Marin	Serie 6378	7190
7590	11/03/2004		EXAMINER	
Linda K. Russell Patent Counsel Air Liquide 2700 Post Oak Blvd., Suite 1800 Houston, TX 77056			TILL, TERRENCE R	
			ART UNIT	PAPER NUMBER
			1744	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/696,575	MARIN ET AL.
	Examiner	Art Unit
	Terrence R. Till	1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 5-10 is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-4, 11 and 13-17 is/are rejected.
- 7) Claim(s) 12 is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 8/13/04.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. ____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: ____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-4 and 11-17 in the reply filed on 9/13/04 is acknowledged. The traversal is on the ground(s) that applicants assert that the specification clearly discloses throughout the text that the two inventions are in fact connected in design, operation and effect. For example, a reading of the specification shows that the lance of claims 1-4 may be used within the boiler system of claims 5-10 by the method of claims 11-17. Applicants respectfully direct the examiner's attention to MPEP sections 808.01 and 806.04 for an explanation of the USPTO's restriction practice guidelines. This is not found persuasive because restrictions are meant to separate **claimed** subject matter; not subject matter disclosed in the specification as being different. What is clear is that claim 1 recites "A lance for injecting a fluid over a predefined target area within a system.." and claim 11 recites "A method of injecting a fluid into an enclosed volume including a target area..". Claim 5 recites "A boiler system comprising: a boiler with an enclosed volume and a target area disposed within the enclosed volume; and a lance comprising:..". As can be seen in the preceding comparison, claims 1 and 11 do not even infer a boiler or that the lance is used in a boiler. Applicant's construction of the claims (1 and 11) has allowed the scope to include more than just a lance inside a boiler.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Flichy et al. (cited in IDS).

4. The patent to Flichy et al. discloses a lance (6-11) for injecting a fluid over a predefined target area within a system, the lance comprising: a support block 8 including an inlet side and an outlet side; and a plurality of channels 9, 11 disposed non-parallel (see figure 4) with respect to each other within the support block and extending between the inlet and outlet sides so as to receive fluid at the inlet side and deliver fluid through the support block for injection from the outlet side of the support block over the target area; wherein at least two channels extend from the inlet side toward the outlet side in a direction away from a central axis of the support block, the central axis intersecting the outlet side and wherein at least two channels have different cross- sectional dimensions. With respect to claim 4, the patent to Flichy et al. is considered to inherently satisfy the equation of claim 4 as the patent to Flichy et al. discloses all the recited structure and therefore must function as applicants' claimed device according to the formula applicants' claimed.

5. Claims 1, 3, 4, 11 and 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsuji.

6. in IDS).

7. The patent to Tsuji discloses a lance (Figures 1-3) for injecting a fluid over a predefined target area within a system, the lance comprising: a support block 4 including an inlet side 1 and an outlet side 4'; and a plurality of channels 6a-d disposed non-parallel (see figure 1) with respect to each other within the support block and extending between the inlet and outlet sides so

as to receive fluid at the inlet side and deliver fluid through the support block for injection from the outlet side of the support block over the target area; wherein at least two channels extend from the inlet side toward the outlet side in a direction away from a central axis of the support block, the central axis intersecting the outlet side. As can be seen in figure 1, Tsuji discloses the target area includes a plurality of consecutively aligned sectors (as demonstrated by θ_1 – θ_4), and the channels are oriented within the support block such that a central axis of a fluid stream injected from each channel over the target area is centered between longitudinal boundaries defined by a respective sector. With respect to claim 4, the patent to Tsuji is considered to inherently satisfy the equation of claim 4 as the patent to Tsuji discloses all the recited structure and therefore must function as applicants' claimed device according to the formula applicants' claimed. With respect to claim 11, Tsuji is considered to disclose the method recited based on the apparatus disclosed. With respect to claim 15, the same analysis applies as mention previous with respect to claim 4.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuji.

12. The patent to Tsuji discloses the claimed invention except for disclosing a plurality of lances, such that each lance injects fluid over a corresponding target area. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a plurality of lances to the patent of Tsuji to practice the claimed method, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. St. Regis Paper Co. v. Bemis Co., 193 USPQ 8. Further, multiple injector nozzles are quite common, when the volume I which the nozzles inject is quite large.

Allowable Subject Matter

13. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

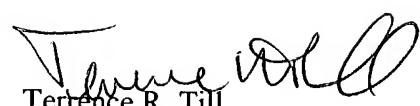
Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Bailey, Berry, Kurzinski, Slavejkov et al., Hutton, Shai et al. and Gulati et al. disclose injector nozzles with diffuse spray patterns typically used in the combustion of fuels.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrence R. Till whose telephone number is (571) 272-1280. The examiner can normally be reached on Mon. through Thurs. and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Warden can be reached on (571) 272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Terrence R. Till
Primary Examiner
Art Unit 1744

trt